

REMARKS

Claims 1-8 are pending in this application, of which claims 1-2 have been amended.

Claims 6 and 7 are withdrawn from consideration and claim 8 is newly-added.

The Abstract and disclosure are objected to for various informalities. Accordingly, attached herewith is a substitute sheet for the Abstract. The specification has also been amended to correct such informalities.

Claims 1-3 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent 4,884,900 to Pirault et al. (hereafter, "**Pirault et al.**").

Applicants respectfully traverse this rejection.

Pirault et al. discloses a connecting rod 10 and a bearing cap 16 formed of aluminum alloy. An insert of brittle material 24 is included in the connecting rod 10 when cast.

The connecting rod 10 is formed in a single piece by squeeze casting. The connecting rod 10 has a fracture zone indicated by line 18, as shown in FIG. 1. The fracture zone is formed by incorporating a brittle material in zone 18. After the connecting rod is produced by casting, it is split at the fracture zone 18 to separate it into a cap portion and the rest of the connecting rod. As shown in FIG. 2, an insert 24 of a brittle material is integrally cast with the rest of the connecting rod to provide a fracture zone used for the splitting. In the case of FIG. 3, wires 26 formed of a brittle material are integrally cast with the rest of the connecting rod to provide a fracture zone used for the splitting.

It should be noted that in the method of Pirault et al., the connecting rod 10, after integral casting, is split or separated into a bearing cap and the rest of the connecting rod, which is the major portion of the connecting rod. The bearing cap and the major portion of the connecting rod cooperate to form an entire connecting rod, but they are not equivalent members and have different functions. This means that what are separated into two in Pirault et al. are not equivalent members. Furthermore, in Pirault et al., the once separated two members (the bearing cap and the major portion) are connected together with each other later to form a connecting rod which is the connecting rod before the splitting.

This is not the case in the method of the present invention. In the method of the present invention, bearing members (equivalent to bearing caps) are produced which do not include the major portion of the connecting rod. Furthermore, what is separated into two is a primary workpiece composed of combined bearing members, which primary workpiece is split into substantially equivalent two secondary workpieces which are used to form two equivalent bearing members. The reason why “substantially equivalent” is used in amended claim 1 is that the two secondary workpieces need not be exactly of the same dimensions. The two secondary workpieces separated need only be equivalent in function. It should be noted that the two secondary workpieces thus obtained by separation are not of the nature to be mutually connected together later, unlike the method of Pirault et al. in which the bearing cap and the major portion of the connecting rod obtained by separation are not of the nature to be connected together again.

Accordingly, claim 1 has been amended to recite these distinctions.

Thus, the 35 U.S.C. § 102(b) rejection should be withdrawn.

Claim 4 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Pirault et al. in view of DE 199 59 540 to Beyer-Steinhauer et al. (hereafter, "Beyer-Steinhauer et al.").

Applicants respectfully traverse this rejection.

Beyer-Steinhauer et al. has been cited for teaching the pouring of molten material into a mold cavity in a swirling current so as to promote uniform flow of the molten material inside the mold.

Like Pirault et al. discussed above, Beyer-Steinhauer et al. fails to teach, mention or suggest the features of claim 1, as amended, from which claim 4 depends.

Thus, the 35 U.S.C. § 103(a) rejection should be withdrawn.

Claim 5 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Pirault et al. in view of Applicants' Admitted Prior Art (hereafter, "APA").

Applicants respectfully traverse this rejection.

APA has been cited for teaching that it is known to use an aluminum alloy having high silicon content for such material as attested by applicants at pages 1-3 of the specification, but, like the other cited references discussed above, fails to teach, mention or suggest the features of claim 1, as amended, from which claim 5 depends.

Thus, the 35 U.S.C. § 103(a) rejection should be withdrawn.

U.S. Patent Application Serial No. 10/798,889
Response to Office Action dated December 4, 2006


In view of the aforementioned amendments and accompanying remarks, claims 1-5 and 8, as amended, are in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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PATENT TRADEMARK OFFICE

Enclosures: Substitute Abstract of the Disclosure (clean and marked-up versions)

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ABSTRACT OF THE DISCLOSURE:

A bearing member manufacturing method ~~manufactures~~ for manufacturing a bearing member 20 formed of a light-metal-base material and capable of stably supporting a rotational shaft at a reduced manufacturing cost. The bearing member manufacturing method manufactures a bearing member 20 including a bearing body 21 formed of a first material, a light-metal-base material, and a bearing part 22 formed of a light-metal-base material different from that forming the body part 21, the bearing part 22 having a bearing surface 23 and bonded to the body part 21. A first workpiece 30 having a cylindrical inside surface 30a serving as the bearing surface 23 is placed in a mold 50. The molten first material is poured into a cavity 56 surrounding the first workpiece 30 to cast a second workpiece 32. The first workpiece 30 and the second workpiece 32 are bonded metallurgically along the interface between the first workpiece 30 and the second workpiece 32 to form a primary workpiece 34 in the form of a semifinished workpiece 33. The semifinished workpiece 33 is divided into ~~haves~~ halves along a center plane P2 including the center axis L2 of the inside surface 30a. Thus, two secondary workpieces 35 to be finished in the two bearing members 20 are obtained by cutting the single semifinished workpiece